

WHAT IS CLAIMED IS:

1. A hinge with which an open/closed body is swingably joined to a main body, the hinge comprising:
 - 1 a tubular base part being attached to one of the main body and the open/closed body;
 - 2 a rotation body being attached to another of the main body and the open/closed body, and rotationally supported by opposite side wall end parts of said base part, said rotation body having a cam part;
 - 3 a wedge body being reciprocatably housed in said base part and having a slope for coming in sliding contact with the cam part according to a rotation of said rotation body;
 - 4 an elastic member being housed in said base part for urging said wedge body toward said rotation body;
 - 5 a sliding contact face being formed on an inner wall of said base part in a side of said wedge body with respect to a rotation axis of said rotation body, the sliding contact face having a concave surface defined by a parallel move path of a line almost parallel with the rotation axis; and
 - 6 a sliding contact part being formed in said rotation body for coming in sliding contact with said sliding contact face when said rotation body rotates.
2. The hinge as claimed in claim 1 wherein said sliding contact part is formed in a proximity of a tip of the cam part.

3. The hinge as claimed in claim 1, wherein said wedge body is pressed into the base part.

5 4. The hinge as claimed in claim 1, wherein said sliding contact face and said sliding contact part are disengaged against each other when said open/closed body is in a fully closed position or in a fully open position.

10 5. The hinge as claimed in claim 1, wherein the distance from the rotation axis to an arbitrary point on said sliding contact face varies so that a frictional force occurring between said sliding contact part and said sliding contact face varies in response to the rotation angle of said rotation body.

15

6. An image input/output apparatus comprising:

 a first housing for housing a printing unit;
 a second housing for housing an image read unit being placed on said first housing; and

20 a hinge for swingably joining said second housing to said first housing, the hinge including:

 a tubular base part being attached to one of the main body and the open/closed body;

25 a rotation body being attached to another of the main body and the open/closed body, and rotationally supported by

opposite side wall end parts of said base part, said rotation body having a cam part;

5 a wedge body being reciprocatably housed in said base part and having a slope for coming in sliding contact with the cam part according to a rotation of said rotation body;

an elastic member being housed in said base part for urging said wedge body toward said rotation body;

10 a sliding contact face being formed on an inner wall of said base part in a side of said wedge body with respect to a rotation axis of said rotation body, the sliding contact face having a concave surface defined by a parallel move path of a line almost parallel with the rotation axis; and

15 a sliding contact part being formed in said rotation body for coming in sliding contact with said sliding contact face when said rotation body rotates.

7. The image input/output apparatus claimed in claim 6, wherein said sliding contact part is formed in a proximity of a tip of the cam part.

20

8. The image input/output apparatus as claimed in claim 6, wherein said wedge body is pressed into the base part.

9. The image input/output apparatus The hinge as claimed 25 in claim 6, wherein said sliding contact face and said sliding

contact part are disengaged against each other when said open/closed body is in a fully closed position or in a fully open position.

5 10. The image input/output apparatus as claimed in claim 6, wherein a distance from the rotation axis to an arbitrary point on said sliding contact face varies so that a frictional force occurring between said sliding contact part and said sliding contact face varies in response to the rotation angle of said 10 rotation body.

11. An image input/output apparatus comprising:

a first housing for housing a printing unit, having a tube part being extended like a tube in a bottom direction from 15 an opening formed in a ceiling of said first housing;

a second housing for housing an image read unit, being placed on said first housing; and

a hinge for swingably joining said second housing to said first housing, said hinge including

20 a base part fitted into the tube part,

a rotation body attached to said second housing and rotationally supported on the base part, and

25 an urging device for providing a rotation force to the rotation body in a direction of bringing said second housing away from said first housing and providing a rotation force

to the base part in an opposite direction to the rotation force to the rotation body.

12. The image input/output apparatus as claimed in claim 11
5 wherein the tube part is held or fixed to a bottom of said first housing.

13. The image input/output apparatus as claimed in claim 11,
wherein the tube part has an attachment part being fixed to
10 a top face of said first housing.

14. The image input/output apparatus as claimed in claim 11,
wherein the rotation body is fixed to a ceiling or a bottom
of said second housing.

15

15. The image input/output apparatus as claimed in claim 11,
wherein the rotation body is fixed to one of the ceiling and
the bottom of said second housing and is held to the other.

20